



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 2nd Semester Examination, 2019

BOTACOR04T-BOTANY (CC4)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.**Candidates should answer in their own words and adhere to the word limit as practicable.**All symbols are of usual significance.*

1. Answer briefly: 1×6 = 6
 - (a) What is amphigastria?
 - (b) What do you mean by eusporangiate type of sporangial development?
 - (c) What is mixed type of sorus?
 - (d) If the chromosome number in the leaf of *Funaria* is 10, what will be the chromosome number in the spores?
 - (e) Name a gymnosperm with manoxylic wood.
 - (f) How the phloem of gymnosperm differ from angiosperm?

2. Answer any **eight** questions from the following: 3×8 = 24
 - (a) Write a brief note on the adaptations needed for transition to land habit.
 - (b) State with reasons, which class is more advanced among Hepaticopsida and Bryopsida.
 - (c) State the distinctive feature of *Sphagnum* leaf.
 - (d) Draw a labelled diagram of L.S. of the archegoniophore highlighting the parts of archegonium.
 - (e) Name one fossil pteridophyte and its identifying characters. 1+2
 - (f) Draw and describe the spore producing structure of *Psilotum*. 1+2
 - (g) What is the contribution of seed habit of pteridophytes in the evolution of seed plant?
 - (h) Distinguish between perigynium and calyptra.
 - (i) Why are the female cones of *Cycas* not considered as true cones?
 - (j) Comment on the ovule of *Gnetum*.
 - (k) Name the plant yielding Canada balsam. Mention two economic importance of *Pinus*. 1+2
 - (l) Draw and label the longitudinal section of *Equisetum* cone.
 - (m) What is the fate of amphithecium and endothecium in classes Hepaticopsida and Anthocerotopsida?

3. Answer any **two** questions from the following: 5×2 = 10
 - (a) Give the ecological and economical significance of *Sphagnum*. 3+2
 - (b) Draw a labelled diagram of the longitudinal section of the capsule of *Funaria*. 3+2
Explain the role of peristome in the dispersal of the spores.
 - (c) Write a note on the stelar evolution of pteridophytes with examples. 5
 - (d) What is sulphur dust of *Pinus*? Describe with labelled diagram the longitudinal section of female cone of *Pinus*. 1+2+2

—x—